

Date: Tuesday, 7/4/2006 3:18:30 PM  
 User: Kim Johnston

## Process Sheet

SP. ET-1

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 27746  
 Estimate Number : 11394  
 P.O. Number : NIA  
 This Issue : 7/4/2006 S.O. No. : NIA  
 Prsht Rev. : NC  
 First Issue : NIA Type : PURCHASED PARTS  
 Previous Run : 27746  
 Written By : SEE COMMENT BELOW  
 Checked & Approved By : 06.07.09  
 Comment :  
 : Est. A 06.03.22 New issue KJ/JLM  
 Est B 05.05.09 Added engraving EC  
 Est Rev:06-07-03 As per Rev C JLM

Drawing Name : BUBBLE WINDOW, RH  
 Part Number : D32692  
 Drawing Number : D3269 REVC/DSI9329 B  
 Project Number : N/A  
 Drawing Revision : C/B  
 Material : NIA  
 Due Date : 7/5/2006  
 Qty: 3 Um: 10 Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: 1602

C207/05/06

(10)

Manufacture D3269-2 as per Dwg D3269

Possible Supplier: Canus

Material release note is required

2.0 D32692P Bubble Window, RH R44



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)  
 Bubble Window, RH R44

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Recieve &amp; Inspect for Transit Damage

Ensure Material Release Note is attached

4.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

5.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1  
 Engrave p/n & batch# per Dwg D3269

SAN 06.07.24

(3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
	1.0						

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
06-07-24	1.0	Window mat'l is too thin.		See NCR 067.		06-07-24		06-07-24

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 06/07/24

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date: Tuesday, 7/4/2006 3:18:30 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BUBBLE WINDOW, RH

Job Number: 27746

Part Number: D32692

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:           

8.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



*AJ 06.07.24*



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

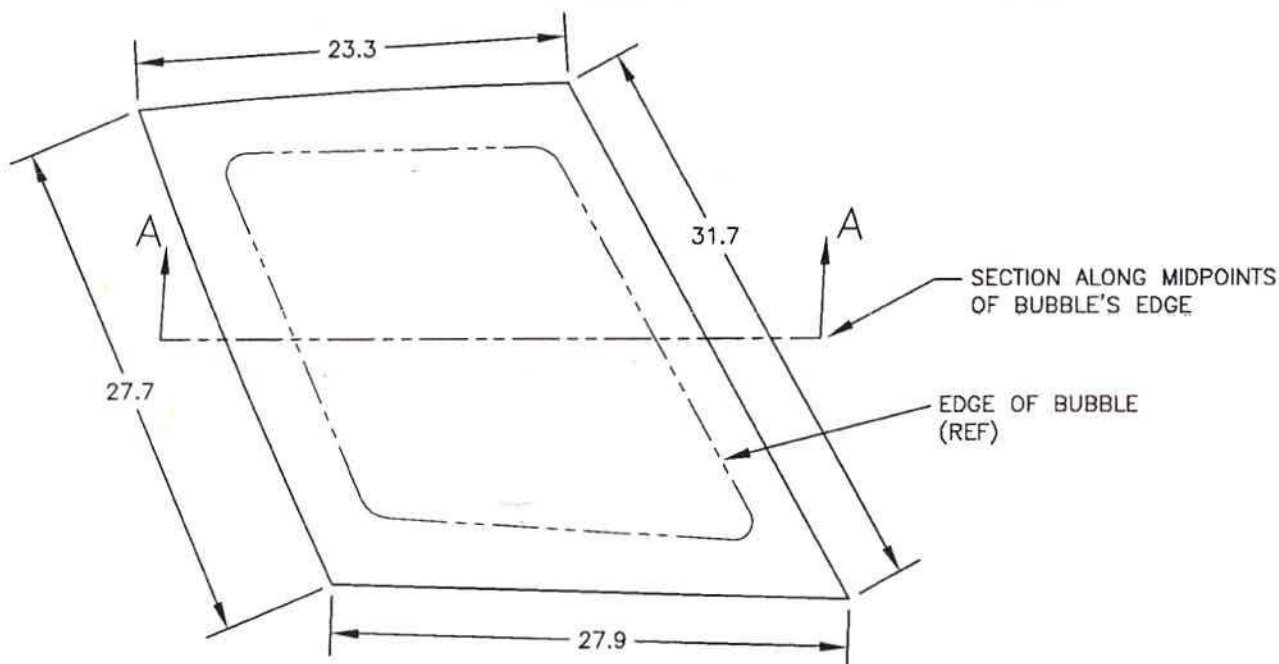
NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



DESIGN	CP	DRAWN BY	if	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	HA	APPROVED	HA	DRAWING NO. D3269	REV. C SHEET 1 OF 1
DATE 06.06.22			TITLE BUBBLE WINDOW (R44)		SCALE 1:10
A	05.02.18		NEW ISSUE		
B	05.03.10		UPDATE MATERIAL SPEC.		
C	06.06.22		NO LONGER TRIMMED		

RELEASED  
de de 29



ENGRAVE P/N & B/N ON  
FLANGE WITHIN 0.25" OF BUBBLE.  
USE 0.125" LETTERS  
TO MAX DEPTH OF 0.005".

EDGE OF BUBBLE  
(REF)

3.8" MIN. MAT'L  
THICKNESS  
= 0.100"

6.2" MIN. MAT'L  
THICKNESS  
= 0.050"

10.0" ± 0.25"

### SECTION A-A

#### D3269-1 BUBBLE WINDOW, LH (SHOWN) / D3269-2 BUBBLE WINDOW, RH (OPPOSITE)

1) FORM PER D3269-1T1B (-1) OR D3269-2T1B (-2)

FORMING PROCESS:

- DRAPE OVER D3269-1T1/-2T1 MOLD
- HEAT TO 250°F
- VACUUM FORM TO SPECIFIED HEIGHT
- LEAVE FOR AT LEAST 20 MINUTES COVERED WITH INSULATED BLANKETS TO COOL

2) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C, 0.188 TH.  
MINIMUM THICKNESS AFTER FORMING AS SHOWN ABOVE

3) ALL DIMENSIONS ARE IN INCHES

4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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**DART**

DESIGN GP	DRAWN BY LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED UP	APPROVED H	DRAWING NO. DSI 9329	REV. B SHEET 1 OF 1
DATE 06.06.26	TITLE BUBBLE WINDOW INSTALL MOD.		SCALE NTS
A	06.04.25	NEW ISSUE	
B	06.06.26	CHG TO EFFECTIVE AFTER CHG 002	

## **DART SERVICE INSTRUCTION**

TO AMEND INSTALLATION INSTRUCTIONS IIN-D044-713 REV. A  
REF. CANADIAN STC: SH05-13 ISSUE 1  
REF. FAA STC: SR02088NY

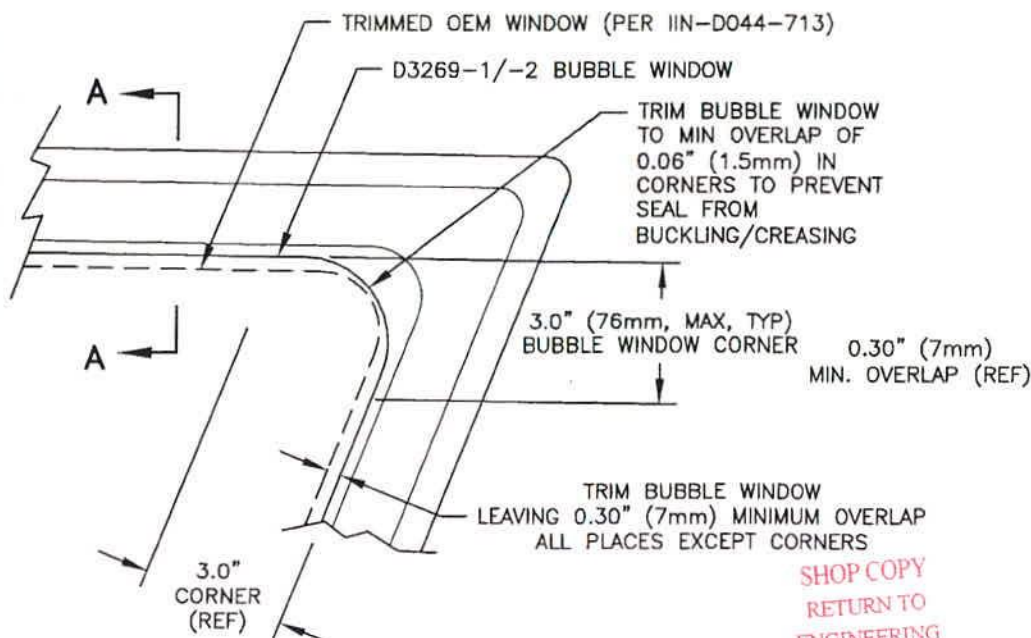
**PURPOSE:** For the D044-713-013/-014 kits supplied after CHG 002, the D3267-1/-2 bubble windows have been supplied untrimmed to allow for easier installation in the field. The installer must trim the windows in accordance with these instructions prior to installation.

**PROCEDURE:**

- 1) Modify the R44 crew door per items 3.2.1 and 3.2.2 of Installation Instructions IIN-D044-713 Rev.A.
- 2) Fit and trim the D3269-1/-2 Bubble Window to match the cutout in the door as follows: The bubble window must be a minimum of 0.30" (7mm) larger than the cutout in the OEM window as shown in the figure below. However, in the corners of the window, it is acceptable to trim a 0.06" minimum overlap (1.5mm) to help prevent the D2126-0903 Seal from buckling/creasing in the corners. The edge of the bubble window must be deburred to a smooth finish.
- 3) Continue installing the bubble window per items 3.2.3 through 3.2.5 of the installation instructions.

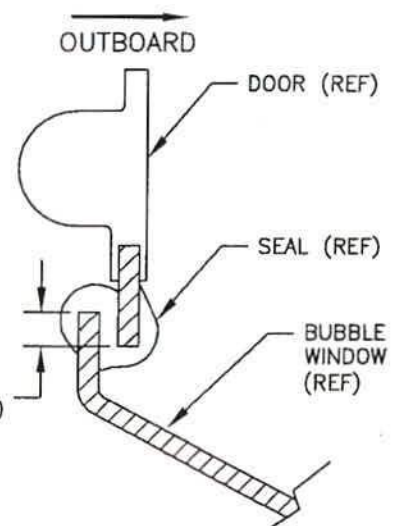
**FIGURE 1**

LOOKING AT INSIDE CORNER OF DOOR



**SECTION A-A**

(NOT TO SCALE)



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WORK ORDER  
NO. 27746

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

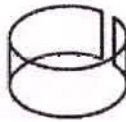
APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 06.06.26  
CERT. NO.: SH05-13  
ISSUE NO.: 1

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**CANUS** Plastics Inc.

300 LISGAR ST  
OTTAWA, ONTARIO  
K2P 0E2  
PH: 613-232-2657  
FAX: 613-232-6214

Certificate of Conformance

Date: 12/09/05

To: DART AEROSPACE  
1270 ABERDEEN ST.  
HAWKESBURY, ON  
K6A 1K7

P.O.#: PO00001602

Order# 127591

The undersigned hereby certifies that the materials supplied and the items shipped under the above purchase order, are in conformance with, all applicable specifications and/or purchase order requirements. All reports of the materials supplied are on file and can be made available upon request.

<u>Quantity</u>	<u>Description</u>	<u>Specification</u>
3	D32692P BUBBLE WINDOW	DWG D3269-2

SIGNED: \_\_\_\_\_

**CANUS PLASTICS INC.**  
**300 Lisgar Street**  
**Ottawa, ON**  
**K2P 0E2**

Phone: 613 232 2657  
info@canusplastics.com  
www.canusplastics.com

Fax: 613 232 6214

**Packing Slip** 127591

CUSTOMER NO. 163233

**BILL TO:** DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

**SHIP TO:** SAME

Attn: Accounts Payable

(613)632-3336

DATE	SHIP VIA	F.O.B.	TERMS
07/21/06	canus	Our Dock	Net 30 days

P.O. NUMBER	ORDER DATE	SALESPERSON
PO00001602	07/20/06	TM

PART NUMBER	DESCRIPTION	REQ.	QUANTITY SHIPPED	B.O.
MFG	D32692P BUBBLE WINDOW,RH	3	3	

 *Per/21*